

Themis (N-terminal region) Peptide

Cat. # TX3885

Size 50 µg

Background:

During positive selection, thymocytes transition through a stage during which T cell antigen receptor (TCR) signaling controls CD4-versus-CD8 lineage selection and maturation. Thymocyte-expressed molecule involved in selection (themis) is critically required for this thymocyte selection. Themis has been identified as several molecules: Grb2-associating protein (GASP), signaling phosphoprotein specific for T cells (SPoT), TSEPA, and thylex. Themis is a cytosolic protein with no known functional motifs. Its expression is observed primarily in T cells, especially immature CD4/CD8 double positive thymocytes. Themis-deficient thymocytes have defective positive selection, and fewer numbers of mature thymocytes. These themis-induced effects may be due to defective TCR signaling since themis constitutively associates with the TCR adaptor Grb2, and themis is phosphorylated quickly after TCR stimulation. In addition, themis is required for optimal TCR-driven calcium mobilization and activation of the MAP kinase Erk. Thus, themis may be an important adaptor protein in TCR signaling.

References

- Johnson, A.L., et al. (2009) Nat Immunol. 10(8):831.
Lesourne, R., et al. (2009) Nat Immunol. 10(8):840.
Fu, G., et al. (2009) Nat Immunol. 10(8):848.
Kakugawa, K., et al. (2009) Mol Cell Biol. 29(18):5128.
Patrick M.S., et al. (2009) Proc Natl Acad Sci U S A. 106(38):16345.

Peptide Sequence:

Themis (N-terminal region) peptide corresponds to amino acids in the N-terminal region of human themis. This sequence has high homology to the conserved region in rat and mouse themis.

Applications:

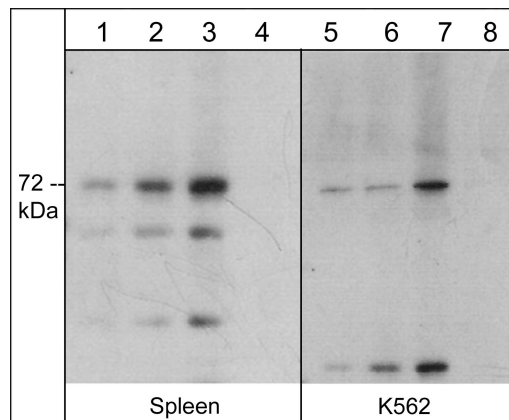
Blocking 1:1000

ELISA 50 ng/well

End user should determine optimal concentration dependent on the concentration of the antibody.
Recommended for blocking antibody reactivity in Western blot and immunocytochemistry.
ELISA established in 96-well Nunc immunoplates where peptide was bound to plates for 2 hrs in 0.1 M sodium carbonate buffer, pH 8.5.

Related Products:

- TP3881 Themis (N-terminal region) Rabbit Polyclonal
PK6140 p38 MAPK Phospho-Regulation Antibody Sampler Kit
PP3411 p38α MAP Kinase (Tyr-323), phospho-specific Rabbit Polyclonal
PM2291 PYK2 (C-terminal region) Mouse Monoclonal
SK6350 c-Src Phospho-Regulation Antibody Sampler Kit
GM3311 Grb2 Mouse Monoclonal



Western blot of mouse spleen (lanes 1-4) and human K562 cells (lanes 5-8). The blots were probed with anti-themis (N-terminal region) rabbit polyclonal antibody at 1:2000 (lanes 1 & 5), 1:1000 (lanes 2 & 6), 1:500 (lanes 3 & 7), or 1:500 in the presence of themis blocking peptide (TX3885) (lanes 4 & 8).

Buffer and Storage:

Blocking Peptide is supplied in 50µl phosphate-buffered saline and 0.05% sodium azide.

Store at -20°C. Stable for 1 year.

Specificity:

The peptide is specifically recognized by themis (N-terminal region) antibody (TP3881) in ELISA, and has been shown to block the reactivity of TP3881 in Western blot. In addition, the peptide is recommended for use in blocking TP3881 reactivity in immunocytochemistry.

FOR RESEARCH USE ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

www.ecmbiosciences.com
telephone: 859-879-2075
toll-free: 1-800-859-8202
email: info@ecmbiosciences.com

ECMBiosciences

Rev 2/1/2010